

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
4 April 2002 (04.04.2002)

PCT

(10) International Publication Number
WO 02/027529 A3

(51) International Patent Classification⁷: **G06F 17/30**

(21) International Application Number: PCT/US01/30021

(22) International Filing Date:
27 September 2001 (27.09.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/235,926 28 September 2000 (28.09.2000) US
09/963,401 27 September 2001 (27.09.2001) US

(71) Applicant: **ORACLE CORPORATION** [US/US]; 500 Oracle Parkway, M/S 50p7, Redwood Shores, CA 94065 (US).

(72) Inventors: **TAMAYO, Pablo**; 71 Howard Street, Cambridge, MA 02139 (US). **MYCZKOWSKI, Jacek**; 136 West Bare Hill Road, Harvard, MA 01451 (US). **CAMPOS, Marcos**; 345 Harvard Street, Cambridge, MA 02138 (US).

(74) Agent: **PENNINGTON, Edward, A.**; Swidler Berlin Shereff Friedman, LLP, 3000 K Street, N.W., Washington, DC 20007 (US).

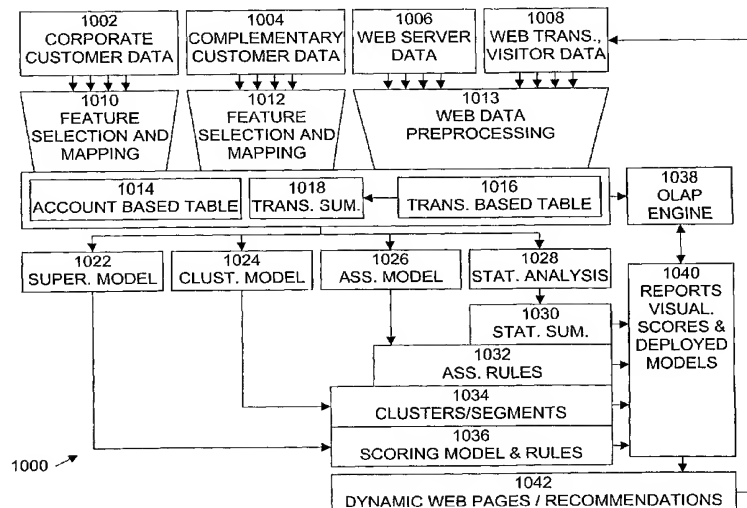
(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— with international search report

[Continued on next page]

(54) Title: ENTERPRISE WEB MINING SYSTEM AND METHOD



(57) Abstract: An enterprise-wide web data mining system, computer program product, and method of operation thereof, that uses Internet based data sources, and which operates in an automated and cost effective manner. The enterprise web mining system comprises: a database coupled to a plurality of data sources, the database operable to store data collected from the data sources; a data mining engine coupled to the web server and the database, the data mining engine operable to generate a plurality of data mining models using the collected data; a server coupled to a network, the server operable to: receive a request for a prediction or recommendation over the network, generate a prediction or recommendation using the data mining models, and transmit the generated prediction or recommendation.



WO 02/027529 A3



(88) Date of publication of the international search report:
28 August 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

Intern application No

PCT/US 01/30021

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06F17/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>MOBASHER B ET AL: "Automatic personalization based on web usage mining" COMMUNICATIONS OF THE ASSOCIATION FOR COMPUTING MACHINERY, ASSOCIATION FOR COMPUTING MACHINERY. NEW YORK, US, vol. 43, no. 8, August 2000 (2000-08), pages 142-151, XP002210034 ISSN: 0001-0782 the whole document</p> <p>---</p> <p>--/--</p>	1-48

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

22 May 2003

Date of mailing of the international search report

13/06/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Denoual, M

INTERNATIONAL SEARCH REPORT

Intern Application No

PCT/US 01/30021

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	COOLEY R ET AL: "Web mining: information and pattern discovery on the World Wide Web" TOOLS WITH ARTIFICIAL INTELLIGENCE, 1997. PROCEEDINGS., NINTH IEEE INTERNATIONAL CONFERENCE ON NEWPORT BEACH, CA, USA 3-8 NOV. 1997, LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, US, 3 November 1997 (1997-11-03), pages 558-567, XP010254370 ISBN: 0-8186-8203-5 the whole document	1-48
X	KLEISSNER C: "Data mining for the enterprise" SYSTEM SCIENCES, 1998., PROCEEDINGS OF THE THIRTY-FIRST HAWAII INTERNATIONAL CONFERENCE ON KOHALA COAST, HI, USA 6-9 JAN. 1998, LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, US, 6 January 1998 (1998-01-06), pages 295-304, XP010262792 ISBN: 0-8186-8255-8 the whole document	1-48
X	SRIVASTAVA ET AL: "Web Usage Mining: Discovery and Applications of Usage Patterns from Web Data" SIGKDD EXPLORATIONS, ASSOCIATION FOR COMPUTING MACHINERY, 'Online! vol. 1, no. 2, January 2000 (2000-01), pages 12-23, XP002241892 Retrieved from the Internet: <URL:http://viror.wiwi.uni-karlsruhe.de/webmining/bib/pdf/Srivastava2000.pdf> 'retrieved on 2003-05-14! the whole document	1-48
X	US 5 692 107 A (KERBER RANDY G ET AL) 25 November 1997 (1997-11-25) abstract column 1, line 29-40 column 2, line 5-50 column 4, line 16-63	1-48
A	WO 00 20982 A (BRYE TODD MICHAEL ;HILDRETH JAMES DEAN (US); MILLER TIMOTHY EDWARD) 13 April 2000 (2000-04-13) abstract page 5, line 6 -page 6, line 9 page 7, line 11 -page 8, line 8 page 9, line 17 -page 13, line 9	1,11,21, 31

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat

Application No

PCT/US 01/30021

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5692107	A	25-11-1997	NONE
WO 0020982	A	13-04-2000	AU 6169399 A 26-04-2000
			AU 6284699 A 26-04-2000
			AU 6412099 A 26-04-2000
			AU 6412399 A 26-04-2000
			EP 1125224 A1 22-08-2001
			EP 1116125 A1 18-07-2001
			EP 1208480 A1 29-05-2002
			EP 1121653 A1 08-08-2001
			WO 0020982 A1 13-04-2000
			WO 0020997 A1 13-04-2000
			WO 0020998 A1 13-04-2000
			WO 0020999 A1 13-04-2000
			US 6549910 B1 15-04-2003
			US 6421665 B1 16-07-2002
			US 6438552 B1 20-08-2002
			US 6553366 B1 22-04-2003